

Amendments to the Claims

Please amend the claims in the manner indicated.

1. (currently amended) A method comprising:
transmitting a header over an air interface, at a first modulation rate; and
transmitting, in a same frame as the header, a consolidated payload over the
air interface, at a second modulation rate different than the first modulation rate,
wherein the consolidated payload includes multiple data units.
2. (original) The method of claim 1, wherein the header includes an indication
of the second modulation rate that will be used to transmit the consolidated payload,
and wherein the header and the multiple data units form a portion of a single, self-
describing, protocol data unit.
3. (original) The method of claim 1, wherein the header includes information
that enables a receiver to determine when an end of the consolidated payload will
occur.
4. (original) The method of claim 1, wherein the header includes information
that enables a receiver to determine when an end of each of the multiple data units
will occur.
5. (original) The method of claim 1, wherein the consolidated payload further
includes information that enables a receiver to determine when an end of each of the
multiple data units will occur.

6. (original) The method of claim 5, wherein the information includes multiple delimiters which include a delimiter for at least one of the multiple data units, wherein the delimiter for a data unit includes an indication of a length of the data unit, and wherein the delimiter is transmitted before the data unit at the second modulation rate.
7. (original) The method of claim 6, wherein the delimiter further includes a validation field, which enables a receiver to determine whether the indication of the length is received correctly.
8. (original) The method of claim 1, wherein transmitting the consolidated payload occurs within approximately one symbol width of an end of the header.
9. (original) The method of claim 1, wherein the header is a physical device header, and wherein at least one of the multiple data units include a service data unit that is separately deliverable by a receiver.
10. (original) The method of claim 1, wherein the first modulation rate is in a range of approximately 6 to 12 megabits per second.
11. (original) The method of claim 1, wherein the second modulation rate is in a range of approximately 6 to 240 megabits per second.
12. (currently amended) A method comprising:
 - ~~switching a transmitter to a first modulation rate;~~
 - transmitting a preamble over an air interface ~~;~~at the at a first modulation rate, wherein the preamble enables a receiver to synchronize;
 - transmitting a header over the air interface ~~[[,]]~~ at the first modulation rate;
 - ~~switching to a second modulation rate;~~ and
 - transmitting a consolidated payload over the air interface ~~;~~at the at a second modulation rate different than the first modulation rate, wherein the consolidated

payload includes multiple data units and information indicating the lengths of the multiple data units;

wherein said transmitting a preamble, said transmitting a header, and said transmitting a consolidated payload all occur within a single frame.

13. (original) The method of claim 12, wherein the header includes an indication of the second modulation rate that will be used to transmit the consolidated payload.

14. (original) The method of claim 12, wherein the information includes multiple delimiters which include a delimiter for at least one of the multiple data units, wherein the delimiter for a data unit includes an indication of a length of the data unit, and wherein the delimiter is transmitted before the data unit at the second modulation rate.

15. (currently amended) A method comprising:
~~switching a transmitter to a first modulation rate;~~
transmitting a preamble over an air interface, ~~at the~~ at a first modulation rate, wherein the preamble enables a receiver to synchronize;
transmitting a header over the air interface ~~[[,]]~~ at the first modulation rate, wherein the header includes information that enables the receiver to determine when an end will occur of each of multiple data units within a consolidated payload;
~~switching to a second modulation rate; and~~
transmitting the consolidated payload over the air interface, ~~at the~~ at a second modulation rate different than the first modulation rate, wherein the consolidated payload includes the multiple data units;
wherein the preamble, the header, and the consolidated payload are all in a single frame.

16. (original) The method of claim 15, wherein the header further includes an indication of the second modulation rate that will be used to transmit the

consolidated payload, and wherein the header and the multiple data units form a portion of a single, self-describing, protocol data unit.

17. (original) The method of claim 15, wherein the header is a physical device header, and wherein at least one of the multiple data units include a service data unit that is separately deliverable by the receiver.

18. (currently amended) A method comprising:
receiving a header over an air interface, at a first modulation rate;
~~switching to a second modulation rate; and~~
receiving a consolidated payload, at ~~[[the] a~~ second modulation rate different from the first modulation rate, wherein the consolidated payload includes multiple data units.

19. (original) The method of claim 18, , wherein the header includes an indication of the second modulation rate at which the consolidated payload is modulated, and wherein the header and the multiple data units form a portion of a single, self-describing, protocol data unit.

20. (original) The method of claim 18, wherein the header further includes information indicating when an end of the consolidated payload will occur.

21. (original) The method of claim 18, wherein the header further includes information indicating when an end of each of the multiple data units will occur.

22. (original) The method of claim 18, wherein the consolidated payload further includes information indicating when an end of each of the multiple data units will occur.

23. (original) The method of claim 22, wherein the information includes multiple delimiters which include a delimiter for at least one of the multiple data units, wherein the delimiter for a data unit includes an indication of a length of the

data unit, and wherein the delimiter is received before the data unit at the second modulation rate.

24. (original) The method of claim 23, wherein the delimiter further includes a validation field, the method further comprising:

determining whether the delimiter is valid using information in the validation field; and

if the delimiter is not valid, evaluating at least one delimiter-sized data segment received in the consolidated payload to attempt to find another possible delimiter.

25. (original) The method of claim 18, further comprising determining whether an end of the consolidated payload has been reached based on a measurement of symbol energy.

26. (original) The method of claim 18, further comprising determining that an end of the consolidated payload has been reached when the consolidated payload has at least reached a known length or duration.

27. (original) The method of claim 18, wherein the header is a physical device header, and at least some of the multiple data units are service data units that are separately deliverable by a receiver.

28. (original) The method of claim 18, wherein the first modulation rate is in a range of approximately 6 to 12 megabits per second.

29. (original) The method of claim 18, wherein the second modulation rate is in a range of approximately 6 to 240 megabits per second.

30. (currently amended) An apparatus comprising:

a medium access control device, to provide multiple data units destined for a receiver to a physical device; and

the physical device, coupled to the medium access control device, which is operable to

transmit a header over an air interface, at a first modulation rate; and
transmit a consolidated payload over the air interface, at a second modulation rate different than the first modulation rate, wherein the consolidated payload is to include ~~includes~~ the multiple data units, and the consolidated payload is in a same frame as the header.

31. (original) The apparatus of claim 30, wherein the header includes an indication of the second modulation rate that will be used to transmit the consolidated payload, and wherein the header and the multiple data units form a portion of a single, self-describing, protocol data unit.

32. (original) The apparatus of claim 30, wherein the header includes information to enable a receiver to determine when an end of the consolidated payload will occur.

33. (original) The apparatus of claim 30, wherein the header includes information to enable a receiver to determine when an end of each of the multiple data units will occur.

34. (original) The apparatus of claim 30, wherein the consolidated payload further includes information that enables a receiver to determine when an end of each of the multiple data units will occur.

35. (original) The apparatus of claim 34, wherein the information includes multiple delimiters which include a delimiter for each of the multiple data units, wherein the delimiter for a data unit includes an indication of a length of the data unit, and wherein the delimiter is to be transmitted before the data unit at the second modulation rate.

36. (original) The apparatus of claim 30, wherein the header is a physical device header, and wherein at least some of the multiple data units are service data units that are separately deliverable by a receiver.

37. (original) The apparatus of claim 30, further comprising one or more antennae, coupled to the physical device, which is operable to provide an interface between the air interface and the physical device.

38. (original) The apparatus of claim 30, further comprising an optical transmission device, coupled to the physical device, which is operable to provide an interface between the air interface and the physical device.

39. (currently amended) An apparatus comprising:
a medium access control device, to receive multiple data units from a physical device; and
the physical device, coupled to the medium access control device, which is operable to
receive a header over an air interface, at a first modulation rate; and
~~switch to a second modulation rate and~~ receive a consolidated
payload in a same frame as the header at a second modulation rate different than the first modulation rate, wherein the consolidated payload includes the multiple data units.

40. (original) The apparatus of claim 39, wherein the header includes an indication of the second modulation rate at which the consolidated payload is modulated, and wherein the header and the multiple data units form a portion of a single, self-describing, protocol data unit.

41. (original) The apparatus of claim 39, wherein the header includes information indicating when an end of at least one of the multiple data units will occur.

42. (original) The apparatus of claim 39, wherein the consolidated payload further includes information indicating when an end of at least one of the multiple data units will occur.

43. (original) The apparatus of claim 42, wherein the information includes multiple delimiters which include a delimiter for at least one of the multiple data units, wherein the delimiter for a data unit includes an indication of a length of the data unit, and wherein the delimiter is to be received before the data unit at the second modulation rate.

44. (original) The apparatus of claim 43, wherein the delimiter further includes a validation field, and wherein the physical device is further operable to:

determine whether the delimiter is valid using information in the validation field; and

if the delimiter is not valid, evaluate at least one delimiter-sized data segment received in the consolidated payload to attempt to find another possible delimiter.

45. (original) The apparatus of claim 39, wherein the header is a physical device header, and at least some of the multiple data units are service data units that are separately deliverable by a receiver.

46. (original) The apparatus of claim 39, further comprising one or more antennae, coupled to the physical device, which are operable to provide an interface between the air interface and the physical device.

47. (original) The apparatus of claim 39, further comprising an optical transmission device, coupled to the physical device, which is operable to provide an interface between the air interface and the physical device.

48. (currently amended) A computer-readable medium having program instructions stored thereon to perform a method, which when executed within a wireless local area network device, result in:

transmitting a header over an air interface, at a first modulation rate; and
transmitting a consolidated payload over the air interface, at a second modulation rate different than the first modulation rate, wherein the consolidated payload includes multiple data units in a same frame as the header.

49. (original) The computer-readable medium of claim 48, wherein the header includes an indication of the second modulation rate that will be used to transmit the consolidated payload, and wherein the header and the multiple data units form a portion of a single, self-describing, protocol data unit.

50. (original) The computer-readable medium of claim 48, wherein the header includes information that enables a receiver to determine when an end of at least one of the multiple data units will occur.

51. (original) The computer-readable medium of claim 48, wherein the consolidated payload further includes information that enables a receiver to determine when an end of at least one of the multiple data units will occur.

52. (original) The computer-readable medium of claim 51, wherein the information includes multiple delimiters which include a delimiter for at least one of the multiple data units, wherein the delimiter for a data unit includes an indication of a length of the data unit, and wherein the delimiter is transmitted before the data unit at the second modulation rate.

53. (original) The computer-readable medium of claim 48, wherein the header is a physical device header, and wherein at least some of the multiple data units are service data units that are separately deliverable by a receiver.

54. (currently amended) A computer-readable medium having program instructions stored thereon to perform a method, which when executed within a wireless local area network device, result in:

receiving a header over an air interface, at a first modulation rate; and

~~switching to a second modulation rate and~~ receiving a consolidated payload at a second modulation rate different than the first modulation rate, wherein the consolidated payload includes multiple data units in a same frame as the header.

55. (original) The computer-readable medium of claim 54, wherein the header includes an indication of the second modulation rate at which the consolidated payload is modulated, and wherein the header and the multiple data units form a portion of a single, self-describing, protocol data unit.

56. (original) The computer-readable medium of claim 54, wherein the header includes information indicating when an end of at least one of the multiple data units will occur.

57. (original) The computer-readable medium of claim 54, wherein the consolidated payload further includes information indicating when an end of at least one of the multiple data units will occur.

58. (original) The computer-readable medium of claim 57, wherein the information includes multiple delimiters which include a delimiter for at least one of the multiple data units, wherein the delimiter for a data unit includes an indication of a length of the data unit, and wherein the delimiter is received before the data unit at the second modulation rate.

59. (original) The computer-readable medium of claim 58, wherein the delimiter further includes a validation field, and executing the program instructions further results in:

determining whether the delimiter is valid using information in the validation field; and

if the delimiter is not valid, evaluating at least one delimiter-sized data segment received in the consolidated payload to attempt to find another possible delimiter.

60. (original) The computer-readable medium of claim 54, wherein the header is a physical device header, and wherein at least some of the multiple data units are service data units that are separately deliverable by a receiver.